## **ABSTRACT**

A method is presented for optical control of the quality of a process of chemical mechanical planarization (CMP) performed by a polishing tool applied to an article having a patterned area. The article contains a plurality of stacks each formed by a plurality of different layers, thereby defining a pattern in the form of spaced-apart metal regions. The method is capable of locating at least one of residues, erosion and dishing conditions on the article. At least one predetermined site on the article is selected for control. This at least one predetermined site is illuminated, and spectral characteristics of light components reflected from this location are detected. Data representative of the detected light components is analyzed for determining at least one parameter of the article within the at least one illuminated site.